

REMARKS

Claim 1 has been rejected under 35 U.S.C. 112 for reasons set forth in the Office Action. Claim 1 has been amended to address the issues raised by the Examiner and it is believed that the rejection may now be withdrawn.

Different groups of claims have been rejected under 35 U.S.C. 103 as reciting subject matter obvious over one of several combinations of teachings set forth in several different references. It is to be noted that Claim 1 is the only independent claim. Accordingly, allowance of Claim 1 will inherently result in allowance of all claims depending directly or indirectly therefrom.

For reasons set forth below, it is believed that Claim 1, as now amended, recites subject matter that could not possibly have been obtained from the teachings of the references allegedly supporting the obviousness rejections.

In response to the Examiner's obviousness rejections under 35 USC 103, we respectfully submit that the subject matter of amended Claim 1, as a whole, was not obvious to the skilled person over Yoshikawa et al, Le-Pailleur and Tanaka et al. Not only do these documents fail to teach all of the claimed subject matter, the skilled worker would not combine the teachings to arrive at the claimed subject matter. No significant comments have been put forward in the Final Office Action in response to the applicant's submissions on pages 14 and 15 of the response

dated 24 February 2011 in relation to combining Tanaka with Yoshikawa, which comments are incorporated herein by reference. Further comments are provided below.

The newly cited document, Le-Pailleur, relates to a touch-sensitive detector having first and second modes of operation, whereby finger contact is detected when the finger is in contact with the detection surface such that it can communicate a wave that has been omitted from an electrode (E1 and E2 in Figure 1) to a detector (D1 and D2). Therefore, the touch-sensitive detector operating in the modes is not a capacitive touchpad as currently claimed.

Le-Pailleur discloses a “conducting element” in paragraphs 8, 9 and 18 and also a “conducting part” in paragraphs 31 to 33. It is believed that the conducting part and conducting element relate to the same feature, which is labelled with reference 3 in Figure 1. Paragraphs 8, 9, 18 disclose interaction capacitors being formed between electrodes and the conducting element. However, there is no disclosure of how these interaction capacitors are utilized by the touch-sensitive detector. In fact, the only disclosure of the relevance of the interaction capacitance is in paragraph 33, which states that “the power consumption depends on the interaction capacitance between the electrodes activated to emit the wave and the conducting parts”. As discussed throughout Le-Pailleur, different electrodes can be activated for different modes of operation, and paragraph 33 discusses how the power consumption depends on the mode of operation (that is, the electrodes that are activated) due to the internal capacitance.

There is little teaching in Le-Pailleur as to the effect of providing the “conducting part”/“conducting element”. What teaching there is suggests that the interaction capacitance between the electrodes and conducting parts merely affects the power consumption of the device. The skilled person would not, therefore, find any motivation to combine this feature of Le-Pailleur with those of Tanaka and Yoshikawa as a means to modify the capacitive environment of the electrodes in order to improve the accuracy and speed of touch detection of the system, which is an objective of the present invention (see page 3, lines 12-15 of the specification as filed).

For the first and second modes of operation of Le-Pailleur that are discussed above, the conducting parts (3) of Le-Pailleur cannot be considered as relevant to the electrically conductive medium as presently claimed as it does not “concentrate an electric field between said plurality of spaced apart conductors towards the plane of said supporting medium”, nor is it “adapted to locally modify a capacitive environment between a subset of said plurality of spaced apart conductors”.

Le-Pailleur discloses another mode of operation, which in paragraph 29 is referred to as a third touch-sensitive detection mode. “In the third touch-sensitive detection mode, the electrode controller allows detection of a contact of an external element with the detection surface at two electrodes by the change, upon contact, in an impedance between the two electrodes”. Paragraph 40 goes on to state that “in standby mode, the contact of the finger 10 of the user with the

detection surface 2 is detected by the variation in an impedance between the two groups of electrodes. The impedance detected is of a resistive or capacitive nature depending on the embodiment of the detection surface 2, or of an intermediate nature with a resistive component and a capacitive component”.

That is, the third mode of operation of Le-Pailleur can relate to the capacitive interaction between two electrodes that are in the same plane. It is clearly evident from the figures of Le-Pailleur and the associated description that the electrodes are always in the same plane. Therefore, the conducting parts (3) of Le-Pailleur still cannot be considered as relevant to the electrically conductive medium as presently claimed because they cannot concentrate an electric field between said plurality of spaced apart conductors towards the plane of the supporting medium and cannot locally modify a capacitive environment between a subset of the spaced apart conductors.

Le-Pailleur does not include a first and second series of conductors, whereby the second series of conductors are in a different plane to the first series of conductors, as now claimed. The difference in configuration between the electrodes of Le-Pailleur and of Yoshikawa provides further reason why the skilled person, starting with the teaching of Yoshikawa, would find no motivation to combine that teaching with the conducting parts (3) of Le-Pailleur. Le-Pailleur discloses electrodes (E1, E2) which interact with detectors (D1, D2), and that the consumed power depends upon the interaction between the electrodes and the conducting parts (3).

Yoshikawa is directed to the interaction between the electrodes (6, 7) and the stylus pen (9). It is not clear that the combination of electrodes (6, 7) of Yoshikawa with conductive parts (3) of Le-Pailleur would lead to improved power consumption, let alone to improve the accuracy and speed of touch detection, because of the very different structure and function of the two sets of electrodes.

It is further noted that the conductive medium of Le-Pailleur also does not have a resistivity in the range of 100 ohms per square to 10,000,000 ohms per square.

We submit that the significant differences between the teaching of Le-Pailleur and the claimed subject matter, as well as the significant differences between Le-Pailleur and Yoshikawa lead to a conclusion that the teachings of Le-Pailleur, both alone and in combination with Yoshikawa, should not be considered as relevant to the obviousness of the claimed subject matter. The significant differences include:

- Le-Pailleur is not a capacitive touch pad with a first and second series of conductors extending in different directions in different planes;
- Any electrically conductive medium in Le-Pailleur does not provide the same functionality as defined by Claim 1; and
- Any conductive medium in Le-Pailleur does not have a resistivity in the range of 100 ohms per square to 10,000,000 ohms per square.

Applicant's comments in relation to the combination of the teachings of Tanaka and Yoshikawa, and why they should not be considered together as relevant to the obviousness of the

present application are essentially the same as those put forward in the response dated 24 February 2011 and incorporated herein by reference. Applicant respectfully submits that the skilled person would not expect that the inclusion of the conductive medium, with a specific resistivity value, of Tanaka into the device of Yoshikawa or Le-Pailleur would “improve the accuracy of a pointing object detection and to reduce cost of design, engineering, parts, and manufacturing processes” as suggested on page 6 of the final office action; there is simply no teaching in any of the prior art to this effect.

Applicant respectfully submits that Tanaka, which relates to resistance film touch panels, does not disclose a “conductive medium... to concentrate an electric field between said plurality of spaced apart conductors towards the plane of said supporting medium and adapted to locally modify a capacitive environment between a subset of said plurality of spaced apart without distortion of said conductive medium”. This submission is based at least on the fact that Tanaka does not relate to capacitive touchpads and therefore the transparent conductive films of Tanaka are arranged to be pressed together to detect a data position at the point of contact between the transparent conductive films (paragraph [0316]).

Applicant respectfully submits that when independent Claim 1 is properly construed as a whole, the cited prior art documents would not render the conductive medium that includes all of the technical limitations defined by amended Claim 1 as obvious. Applicant submits that it is inappropriate, and does not give a true reflection of the claimed subject matter, to split up the

technical definition of the conductive medium that is provided by Claim 1 and suggest that Claim 1 is obvious over the three cited prior art documents. Applicant respectfully submits that the following facts, as they apply to the present case, should not destroy the patentability of the claimed invention: the conductive medium is not disclosed at all in a first prior art document (Yoshikawa), however a different type of conductive medium in a different type of device is disclosed in a second prior art document (Le-Pailleur), and a conductive medium having a resistivity in the range that is covered by the claims is disclosed in a third prior art document (Tanaka). The third prior art document (Tanaka) also does not relate to the same type of device as claimed.

In view of the amendments to Claim 1, the above detailed and comprehensive discussion of the prior art and disparity thereof with respect to the subject matter claimed, it is believed that Claim 1 and each of the claims depending directly or indirectly therefrom, are allowable, which allowance is respectfully requested.

Respectfully submitted,

The von Hellens Law Firm, Ltd.

/C. Robert von Hellens/

C. Robert von Hellens
Reg. No. 25,714

CRvH/kn
7330 N. 16th Street, Suite C-201
Phoenix, Arizona 85020
Tel: 602-944-2277